Workbook 2

Accessing American Community Survey Data at the Community, National, and Census-Tract Levels

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Workbook 2: Accessing American Community Survey Data at the Community, National, and Census-Tract Levels

This workbook contains information to aid users in accessing socioeconomic data from the U.S. Census Bureau American Community Survey (ACS) at the city/community, national, and census-tract levels. The document contains the following sections:

1. ACS: Provides an overview of the ACS and the ACS data you will need to conduct your affordability assessment.

2. Accessing city/community- and national-level statistics: Provides step-by-step instructions for accessing data from the ACS at the city/community and national levels.

3. Accessing and mapping data at the census-tract level: Provides guidance for downloading and mapping data from the ACS at the census-tract level.

4. ACS source tables: Provides the specific ACS source tables for the data you will need to obtain through ACS to conduct your affordability assessment.

1. American Community Survey

The U.S. Census Bureau ACS serves as the primary source of data used to develop the affordability measures recommended throughout this guidance. ACS data sets can be used to access socioeconomic data that will allow you to better examine indicators of economic need within your community, including:

• Income levels and income distribution for different types of households

• Poverty rates

• Unemployment rates

• Households receiving public assistance and/or food stamps

• Some information on housing costs and housing burden

ACS data are also used in this Assessment Tool to develop specific affordability metrics, such as comparing average household water and wastewater bills to the median household income (MHI) for each income quintile, and examining the U.S. Environmental Protection Agency's residential indicator at the census-tract level to identify potentially vulnerable communities.

The ACS is a household survey conducted by the U.S. Census Bureau with a current annual sample size of approximately 3.5 million households. The ACS replaced sample (long-form) data from the Census and is now the only source of data on income, poverty status, education, employment, and most housing characteristics. ACS estimates are released in three ways: annually (for geographic areas with populations of 65,000 or more); as a three-year average (for geographic areas with populations of 20,000 or more); and as a five-year average (for all geographies, down to the Census Block Group level). The ACS is considered the most reliable source of detailed socioeconomic data currently available, and is the only source of data available for small geographies.

ACS data are available on the Census Bureau's American FactFinder website, which can be found at http://factfinder2.census.gov. One-year estimates are typically released for the previous year every September; three-year estimates in October; and five-year estimates in December.

Throughout this workbook, we recommend using the ACS to collect socioeconomic data at the city or service area level (i.e., using single-year or three-year average ACS estimates), as well as at smaller geographic scales (e.g., at the census-tract level using five-year average ACS estimates). Analyses of these data on a smaller scale (such as at the census-tract or neighborhood level) can help to identify vulnerable populations and assess potential environmental justice concerns.

The following sections provide additional information and step-by-step instructions for accessing, reporting, and mapping both one-year and five-year average ACS estimates. This includes guidance on navigating the American FactFinder website, specific source tables for socioeconomic data, and how to select the correct geographic area (e.g., place within a state, county, metropolitan service area) for your service area.

2.   Accessing City/Community- and National-level Data

1. Access the American FactFinder website: http://factfinder2.census.gov/.

2. Click the "Search" tab located on the upper left-hand side of the page, and ensure that the "Your Selections" box is empty. If there are selections inside the box, click "X" to remove them.
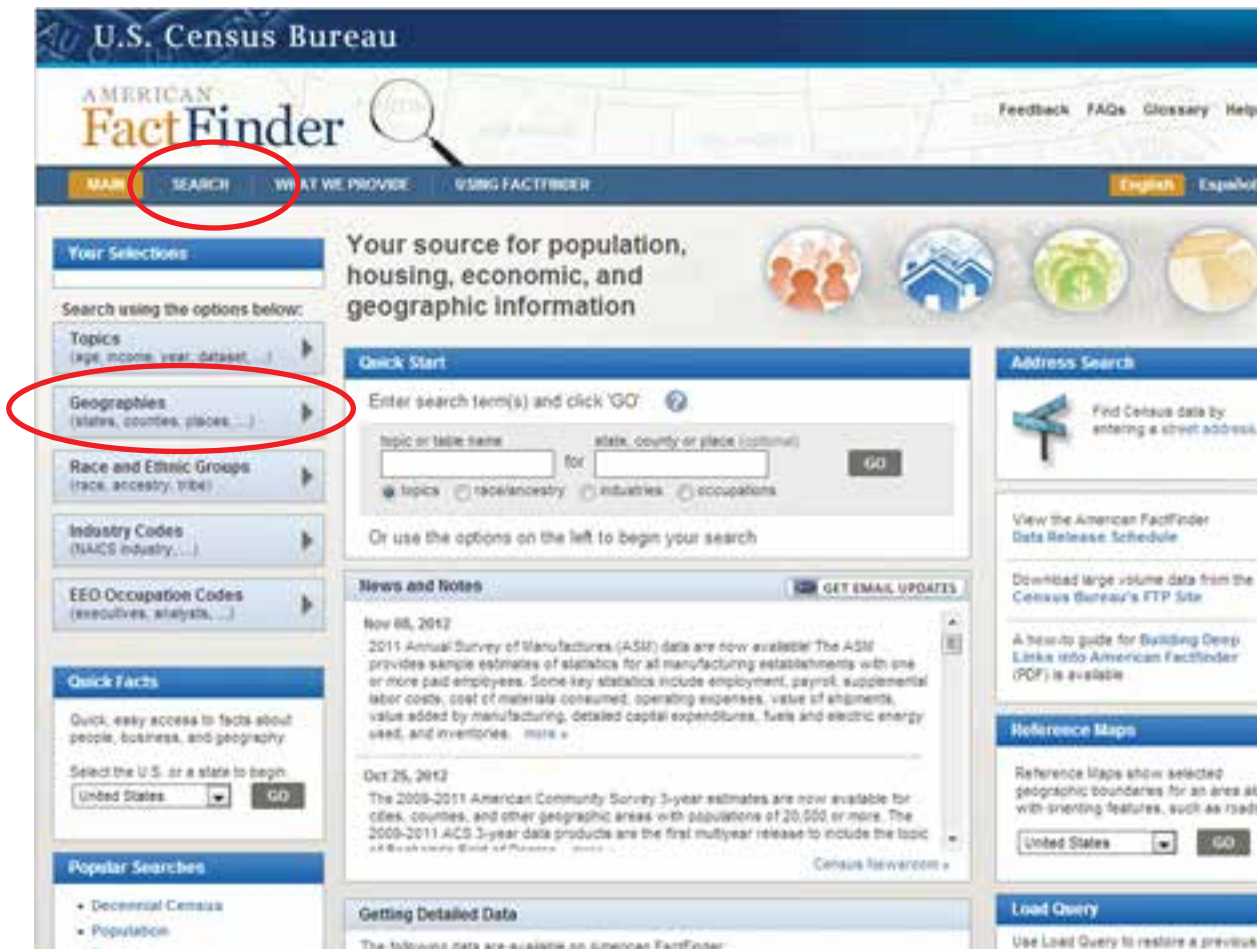
3. Select geographic area.

- On the left-hand side of the page, select "Geographies."

- A pop-up box will appear that allows you to select your desired "geographic type" (e.g., United States, State, County, Place within a State, etc.). The geographic type selected will depend on the coverage area of your utility. For example, if your utility's service area roughly follows county boundaries, you will want to select "County" as the geographic type. The geographic type "Place within State" captures most cities, while "Metro Statistical Area/Micro Statistical Areas" (MSAs) extend beyond city boundaries, including suburbs and related economic areas. For more information on geographic types, see the Census Bureau's Geographic Areas Reference Manual (available at http://www.census.gov/geo/reference/garm.html).

- If you are interested in collecting national-level data, you do not need to select "Geographies"; you can move to the next step.

- After selecting the geographic type, you will be asked to select your specific geographic area. For example, the figure below shows the geographic type of "Metro Statistical Area/Micro Statistical Area." After this is chosen, a list of MSAs will appear.

- Once you have selected your geographic area, click "Add to your selections." You can then add additional geographic areas of interest from this menu. You can also highlight multiple geographies at once (e.g., if your service area encompasses more than one county) by holding down the Ctrl button as you left-click on each geography name.

- When you are finished adding your geographic areas, click "Close" on the upper right-hand side of the "Select Geographies" pop-up box.
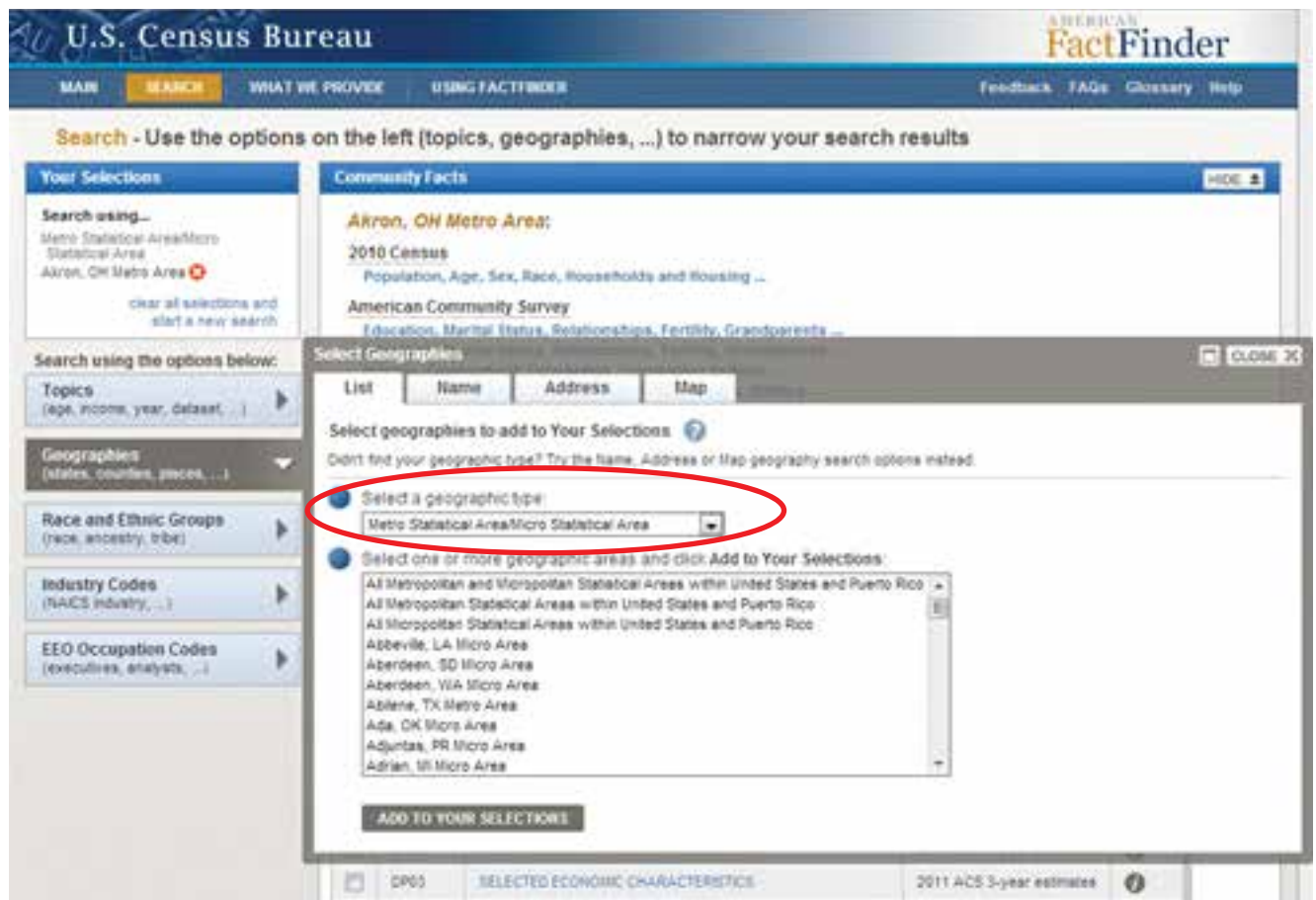
4. Select relevant socioeconomic data.

- Once you close the "Geographies" box, search results will be displayed. The search results include the tables, files, or documents available for the selected geographic areas.

- There will likely be a number of files available. To narrow down your options, you can enter the specific ACS table number or topic in which you are interested in the "Narrow your search" box located above the list of available tables. Relevant files will appear, including options for different data sets (e.g., single-year or multi-year average estimates).

- Alternatively, you can click on the "Topics" box on the left-hand side of the page to narrow your search. A pop-up box will appear that will allow you to select a specific data set (e.g., one-year average estimates from current or previous years, three-year average estimates) or narrow down the field of tables available:

  ❍ To select a specific data set within the "Topics" dialog box, click on the "+" sign next to "Dataset." This will allow you to select the specific data set(s) from which you wish to collect data. The data set(s) you select will appear in the "Your Selections" box on the upper left-hand side of the screen.

  ❍ You can also narrow down the field of tables based on broad categories (e.g., "People and Housing") using the "Topics" dialog box. For example, if data on MHI were needed, click on "People," "Income & Earnings," then "Income/Earnings (Households)." The selected data set(s) will appear in the "Your Selections" box on the upper left-hand side of the screen.

  ❍ After you make your selections, click on the "X" located on the upper right-hand side of the "Topics" dialog box.

- After narrowing your search using either of these methods, the relevant tables, files, and documents will be displayed. Click on the title of the table, file, or document of interest to view it. You can also click on the box adjacent to the file and then click on "View" or "Download." The selected table will appear, as shown here.

- You can view the statistics included in the selected table, modify the table, print the table, or download the data using the buttons above the table.

3. Accessing and Mapping Data from the ACS at the Census-tract Level

The process for accessing ACS data at the census-tract level is similar to the process outlined above for community- and national-level data. However, there are a few differences in the way you will want to select your geographic area and download the data. The following provides an example of this procedure for Buffalo, New York.

1. Select geographic area.

- Once you are at the FactFinder website, select the "Geographies" tab on the left-hand side.

- Within the "Geographies" dialog box, select the "Name" tab on the upper left-hand side.

- In the "Name" tab, under "Geography Filter Options," select "Census Tract."

- Type the city name in the geography name box (e.g., Buffalo, NY) and click "GO."

- A list of options will appear for census tracts within your specified area. Review the results and click the appropriate name where the "Geography Type" is listed as "Census Tract" (do not select any with the type "Census tract within …"). For example, with the Buffalo, NY example, you may want to choose all census tracts fully/partially within Buffalo, NY Urbanized Area, or those that are located fully within Buffalo, NY Urbanized Area.

- Your selection will appear in the "Your Selections" box on the main page. You can now click the "Close" ("X") tab to exit the "Geographies" dialog box.

2. Select relevant socioeconomic data.

- Next, you will want to narrow your search results and click on the table in which you are interested, as described above for community-/national-level data.

• Once you select the table in which you are interested, it will be presented in "Table View" mode. Before downloading the data, you can verify visually that the geographic area selected covers the correct region. To do this, click on "Create a Map," then select a value in the table to create your map.

3. If the area selected is not correct, you can download census-tract data by county, as follows:

• Go back to the main page.

• Select geographic region using "Counties" (instead of selecting by "Name").

• Click the red "X" to remove the previously selected geography.

• On the "List" tab under "Geographic Type," select "Census Tract."
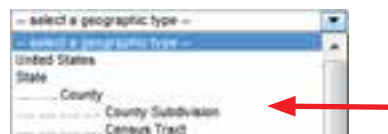
• Select "All Census Tracts within…" for the selected state and county.

• Click "Add to Your Selections" and close the "Geographies" window. Create a map as before and confirm that the geographic area is correct.

4. Download the data.

• Once you have the correct data file, download it by clicking "Download" on the "Table View" page and selecting the csv file format (which can be opened using Excel). This will download a series of files, including a csv file that contains the actual data and a csv "metadata" file that explains the column headers for the data. The figure below provides a snapshot of how data in the csv file are presented.

	A	B	C	D	E
1	GEO.id	GEO.id2	GEO.display-label	HD01_VD01	HD02_VD01
2	1400000U	36029000110	Census Tract 1.10, Erie County, New York	39564	7292
3	1400000U	36029000200	Census Tract 2, Erie County, New York	34091	6929
4	1400000U	36029000500	Census Tract 5, Erie County, New York	30598	14681

When working with census-tract data, it is important to evaluate the margin of error (MOE) associated with the data estimates. MOE estimates are typically located in the column immediately to the right of the data estimate. If the MOE for a specific census tract is very large, you will want to exclude that census tract from your analysis. Census tracts with large MOEs typically have very few people in them (e.g., areas with airports, parks, etc.) and are not representative of an actual population/area. Workbooks 3 and 4 describe the methodology for identifying these census tracts and excluding specific tracts.

If you plan to display the data in a geographic information system program, census tract shapefiles are available at http://www.census.gov/cgi-bin/geo/shapefiles2010/main.

A short video tutorial is available on the Census website: http://factfinder2.census.gov/help/en/virtual_tour.htm.

4. ACS Source Tables

Table 1 provides the specific source table numbers and titles for the data you will need to conduct your affordability assessment. These tables can be accessed using single-year, three-year average, and five-year average ACS estimates, as well as data sets from previous years. Much of these data can also be found in ACS Summary files: Selected Social Characteristics (DP02) and/or Selected Economic Characteristics (DP03).

Table 1. Location of relevant statistics

Statistic	File ID	File title
Population	DP02	Selected Social Characteristics
Household size	DP02	Selected Social Characteristics
MHI	B19013	Median Household Income in the Past 12 months (in inflation-adjusted dollars)
MHI, owner-occupied and renter-occupied households	B25119	Median Household Income in the Past 12 Months (in inflation-adjusted dollars) by Tenure
MHI, elderly households	B19049	Median Household Income in the Past 12 Months (in inflation-adjusted dollars) by Age of Householder
Income distribution (16 income categories)	B19001	Household Income in the Past 12 Months (in inflation-adjusted dollars)
Income distribution, elderly households (16 income categories)	B19037	Household Income in the Past 12 Months (in inflation-adjusted dollars) by Age of Householder
Income distribution, renter- and owner-occupied households (6 categories)	B25118	Household Income in the Past 12 Months (in inflation-adjusted dollars) by Tenure
Income quintiles (upper limits)	B19080	Household Income Quintile Upper Limits
Poverty rates (all residents, children, and elderly)	S1701	Poverty Status in the Past 12 Months
Unemployment	S2301	Unemployment Status
Food stamps	S2201	Food Stamps/SNAP
Public assistance income	B19057	Public Assistance Income in the Past 12 Months for Households
Public assistance income and/or food stamps	B19058	Public Assistance Income or Food Stamps in the Past 12 Months for Households
Housing burden	B25106	Tenure by Housing Costs as a Percentage of Household Income in the Past 12 Months